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Knowledge Society and Information Culture in the Context of Technological Innovations

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While the issue is still heavily debated, one thing is sure: digital technologies are reshaping modern social relationships, as we will explore in the outline. Due to the growing importance of the knowledge society and information culture, societies strive to become more innovative in digital technologies to sustain their growth. Our societies have increasingly considered knowledge an essential input to economic and cultural growth and the development of social behaviors, which are increasingly rooted in information technology. In recent years, societies have been thinking that information culture is the key to economic, cultural, and social development. This piece of research looks at the positive and negative effects of technological innovations that have emerged to help individuals and communities spread their cultures and generate more and more knowledge through the invention of digital technologies. This research will also examine the conceptions of the digital divide and information overload limiting societies' access to knowledge. As the authors clearly stress, drawing on a broad array of theoretical models and empirical studies, various factors should consolidate the information culture of the knowledge society, such as digital literacy, access to technology, and innovation in educational and working environments. The implications of the research findings are as evidence-based – we need to take action with the definite knowledge that fostering an inclusive knowledge society in which people feel confident and empowered to contribute to information processes; this is a task for the future. Recognizing the importance of creating a strong information culture and developing technologies, this study has tried to contribute to ongoing debates on sustainable development and provide some pointers on how to foster more equitable opportunities in an ever-more-interconnected world. This research advocates directed acts to reduce information divides and improve societal capacities to use the digital age's benefits better.

Keywords: digitalization, information security, information literacy, information culture, globalization of the information space, visual culture, global trends, information market, media literacy.

1. Introduction

Today's historical environment is characterized by the dominance of information structures, the digitalization of internal and international relations, and the emergence of global information structures. This context has redefined the knowledge society and information culture. The knowledge society is now seen as a society where economic growth, social development, individual empowerment, and self-realization are rooted in the generation, sharing, and free dissemination of information. The status and role of people's interaction with information are on the rise, a trend that underscores the significant influence of culture on these relations.

Information culture is becoming the key to the evolution of societies into knowledge societies. Information culture is a society's thinking and doing around creating, disseminating, and using information. It is a hardy social organism that includes such important building blocks as information literacy or media literacy and provides the skills needed to function competently in the environment of digital abundance. Information technology represents one piece of the puzzle that shapes information culture and the knowledge culture at large. Further, the acceleration of globalization has led to a digital information space comprising a complex network of information resources that crosses geo-information boundaries. This is a double-edged sword, both a boon and a burden for individuals and communities with the issues of information security and information-related deception that they continuously face. In the context of the development of visual culture and such global trends, the present condition of information culture in the information era must be grasped to establish a healthy citizenry population and develop a sustainable practice of information consumption (Horban & Oliinyk, 2024a). In this context, this paper will discuss the complicated relationship between the knowledge society and information culture. The research will focus on the consequences of digitalization, media literacy, and information security to investigate how modern societies can build up the conditions of a sound and sustainable information culture that facilitates critical engagement, makes society more resilient, and improves the overall quality of life. At the same time, the outcome and discussions of the issues could underpin how to turn digital technologies into opportunities for individuals and society at large in a rapidly changing globalized world.

2. Theoretical Background

The literature on knowledge society and information culture is vast, responding to the complexity that exist in contemporary societies, especially the ones that are strongly influenced by new technology. Thus, we will sum up important written contributions to the knowledge society, information culture, technological innovations, globalization, distinctive features, and consequences.

Concept of the Knowledge Society

Since then, and especially over the last 25 years, the idea has transformed somewhat, often formulated as a knowledge or knowledge-based society, usually in which the production, distribution, and use of knowledge are fundamental to economic and social development (Hornidge, 2011). 'The knowledge worker as the basic resource in a knowledge society

becomes the basic economic resource,' Kuma (2020) declared. According to Alfawaire & Atan (2021) knowledge is also a commodity and a source of competitive advantage, needing to be managed and continuously innovated.

New research by Chang & Feng (2023) underlines that the move to a universal knowledge-based society requires us to rethink the production and validation of knowledge away from hierarchical towards more horizontal and decentralized structures. In turn, this change affects educational paradigms, where educational institutions in the new economy must educate people on the skills they will need to survive in the new knowledge society.

Role of Information Culture

Information culture is an intangible construct that focuses attention on how people access, process, and share information (Shea et al., 2023). It represents the wholeness of an individual's and a society's experience with information, encompassing information literacy, media literacy, and digital literacy—all of which are essential for an individual dealing with the complicated nature and facts of the new age of information.

What was just recently a problem of scientific and semi-scientific discussion of previous decades, with a basically hypothetical character, today actually has a number of direct and indirect signs, showing that modern society is moving towards the informational age:

a. The leading value has become information (Longo et al., 2020).

b. Social stratification has become determined by access to knowledge (Broom et al., 2023).

c. Information technologies have moved to the forefront of social organization (Faik et al., 2020).

d. The global computer network has become the most dynamically developing technological network in the modern world (Shahraki et al., 2020).

The driving force of informational civilization is a knowledge society in which information becomes the decisive factor and the determining factor of social life, the main social value, and the main basis for the development of culture, science, and education. The more accessible information is to all citizens, the better.

Modern society is trying more to do without a technological component (i.e., to stop being a technogenic civilization). The technology optimizes human life by automating routine, non-creative, non-interesting, or annoying functions. In this way, a fundamentally new form of a social organization focused wholly and solely on man, his needs, and expectations. It would probably be an exaggeration to say that the transition to Post-history is not accompanied by a reformulation of values, a new worldview, and the formation of fundamentally new thinking in the individual, but it's impossible to deny that these changes are closely intertwined. According to Walters & Vorster (2021) global informatization is associated with expectations of a qualitative, radical improvement and perfection of the lifestyle of millions of people, their culture, morals, and patterns of behavior.

With the informationalization of the whole world, many new technologies and knowledge are becoming more valuable. These make it easier for people to get useful information, which

gives the whole society and a single individual greater power in human society. It's not exaggerated that information empowerment is the theme of development in our society and self-improvement.

Being open to information culture is the essence of an information society (Horban & Oliinyk, 2024b). In fact, there are quite a few different definitions of information culture – here are some of them:

a. Information culture is one in which the agent can encode a new way of freely entering information (Munster, 2011).

b. Information culture means freedom of exit and access to information at all levels, from global to local (Balkin, 2017).

c. Information culture is a new type of thinking born as an outcome of man liberating himself from rote information and working with his mind, among other traits (Morais & Kolinsky, 2021). A tendency towards developing a person's consciousness is already very apparent today.

Leidner et al. (2020) suppose that we approach information culture from the standpoint of the individual's socialization. In that case, these are individual traits that allow a person to respond adequately to the needs of the globalizing information society for the development of knowledge, professionalism, and competitiveness and are a system of interconnected, interdependent, and continuously changing individual traits in connection with the changes in society. Information culture is not just the societal perception but the personal path of human development.

Information culture is an information aspect of the totality of human culture, objectively reflecting the level of all information processes and information relations carried out in society (Da, 2022). At the same time, the information society is changing. For example, the appearance of graphic writing led to the development of information culture in document circulation, that is, the extraction of fixed information, codification of information, and recording it in written form. The influence of information became more straightforward to use, and the way of thinking changed, but verbal forms of information culture have retained their significance; they were only supplemented by a set of relationships with written means.

As key criteria of a person's information culture, we can highlight the following skills: (i) a clear definition of one's need for information (Peirce et al., 2017); (ii) effective search for necessary information using various information resources (Smith, 2020); (iii) qualitative selection and objective assessment of information (Johnson et al., 2020); (iv) assimilation of information and its transformation into qualitatively new (Katkere & Jain, 1996); (v) computer literacy and information communication skills (Stopar & Bartol, 2019).

All these skills should be rooted in awareness of the centrality of information in society, understanding of the laws of today's information environment and one's place in it, and the ability to handle new information and communication technologies.

Da Veiga et al. (2020) cites key elements of information cultures, including norms and values that influence how people make sense of information, discover information, and use it. Also, there is a need to highlight the cognitive indicators (Wang et al., 2022), indicators of

understanding (Bruggemann et al., 2021), connectivity indicators (Najafi et al., 2021), and globalization indicators (Martens et al., 2010) to demonstrate how cultural factors influence and shape people's usage of information. Therefore, it is crucial to take these factors into consideration. According to Horban et al. (2021), a robust information culture is critical for societies trying to navigate the crises of misinformation and information overload.

Impact of Technological Innovations

Questions surrounding the intersection of technology and knowledge production are core to understanding the constituent futures of both the 'knowledge society' and the 'information society.' The expansion of digital technologies and increase in digitised forms of knowledge production reconfigures how knowledge is made, transmitted and consumed. Liu (2020) argues that content providers on the Internet democratize information fields, as they have profoundly altered 'the very process of creating and validating knowledge.' Likewise, technologies such as AI, big data analytics, and blockchain are further changing the information landscape. Al-Sharafi et al. (2023) explore how AI may generate new modes of data analysis and knowledge management that can enhance organizational capabilities to produce and disseminate information. At the same time, the speed of technological change may raise concerns about how to safeguard information security and build responsible technology applications.

Globalization and Information Space

Globalization has significantly altered the information space, especially in terms of its digitized nature and world existence, as information now circulates across countries and continents, making it more available than in the past. According to Findlay (2021), globalisation leads to new opportunities and risks in terms of information access, in terms of equity of access and of divergent production and distribution of service, of cultural diversity, and of cultural imperialism. The globalization of the information space raises questions about the risks of cultural imperialism, by which dominant cultures could drown minor voices. This also relates to Bimber & Gil de Zúñiga research (2020), although more about media systems and cultural contexts on how different countries permit, deny, or restrict access to information. All these findings point to the necessity of cultural sensitivity and inclusivity for surveying information culture in a globalized environment.

Despite the advances, significant challenges remain in the creation of an information society and culture that can ensure an equitable use of technology and the circulation of information. The digital divide of 'haves' and 'have nots' is still an important issue of inequality in terms of access to technology. Access alone is not enough because, as research by Liesa-Orús et al. (2020) has shown, it needs to be combined with skills that enable people to use technology effectively.

3. Methodology

The research design of this study is based on a systematic review design of literature that aims to provide an evidence-based synthesis of themes and connections between knowledge society, information culture, and technological innovations (Figure 1).

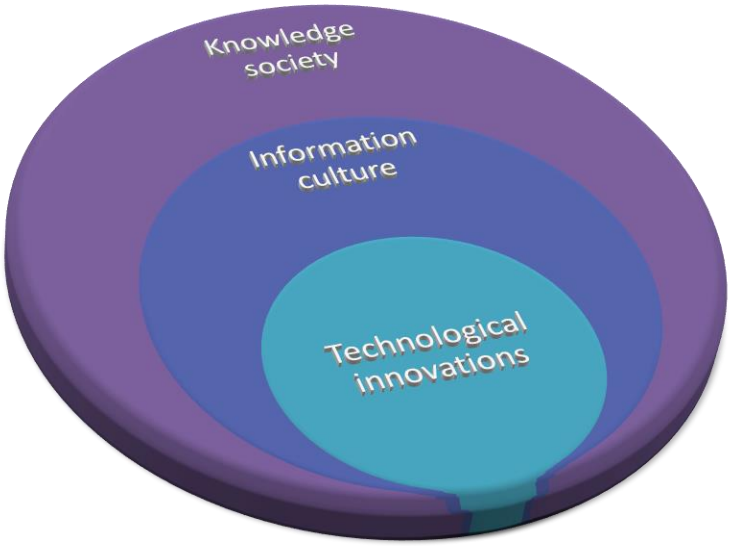

Figure 1. Framework for Analyzing the Interconnections Between Knowledge Society, Information Culture, and Technological Innovations

Research Model

The synthesis was designed based on the following:

1. Literature Review Framework. This literature review frames its analysis in a multi-dimensional heuristic, organized around the main thematic areas of knowledge society and the information culture. The main areas of interest are:

- What is a Knowledge Society? Conceptualizing: What is a knowledge society, and what are its key strengths and challenges - what are some of the prevailing definitions, and how have social and cultural practices for creating and circulating knowledge changed?

- Understanding Information Culture: The second thematic section concerns information culture dimensions: information literacy, media literacy, and digital literacy. These involve the cultural influences on attitudes towards and interaction with information.

- Exploring Technological Innovations: The third axis focuses on the influence emerging digital technologies are having on knowledge production and dissemination, particularly on how technology is shaping contemporary information culture through issues surrounding AI, big data, analytics, and other technologies challenging and/or reshaping our daily use of knowledge.

- Looking at Globalisation and its Effects: In this section, we consider the consequences of globalization on access to information and the information space's power structures.

2. Algorithm of Literature Selection. The algorithm incorporates a rigorously defined search strategy for identifying relevant literature:

- Sources and Databases: Articles, books, and conference proceedings were taken from highly regarded sources such as Scopus, Google Scholar, and JSTOR, which are academic databases.

- Keywords: The primary keywords and phrases of the search include "knowledge society," "information culture," "digitalization," "technological innovations," and "globalization," guided the search process.

- Inclusion and exclusion criteria: The following inclusion criteria were used: only peer-reviewed articles and reviews of interventions of the last 10 years were considered for this review; studies were considered irrelevant (excluded from the thematic analysis) when they didn't contribute to the study on drinking and/or were out of the subject's field.

3. Data Analysis Techniques. To facilitate the analysis, thematic synthesis was used to distill insights out of the selected literature and organize them into categories:

- Thematic Coding: The literature-based themes were set out, and findings were categorized into themes representing the interplay between the knowledge society, information culture, and technology. This process made connections between the findings clear.

- The comparative perspective: A comparative view of the knowledge society in different research contexts based on different research traditions. This was to bring to attention commonalities and particularities in the conceptualisation and study of these ideas.

4. Interpretation and Synthesis of Findings. The integration of findings included:

- Discerning Patterns and Trends: Identifying common themes, patterns, and trends that emerge across the literature reviewed deals with the actualities of the current state of knowledge in terms of the connection in the constructs.

The results are summarised in the form of conclusions and further avenues for research. These implications for future study, including outstanding questions that the literature has not answered, serve as a roadmap for future empirically based research. They inspire and motivate further exploration in this field.

5. Determination of the Research Model. The development of this research model is based on a systematic literature review and qualitative analysis. This rigorous methodology is a significant step in systematically understanding the relationship between technological innovations, information culture, and knowledge society. These three axes are crucial in explaining the evolution of society. The model can provide a thorough understanding of the current discussions and inform policymakers, tutors, and researchers about the implications of new digital technologies on the creation of a knowledge society. With this approach, this article strives to enhance understanding and contribute to further research on how these concepts can evolve toward a new digital society.

4. Results and Discussion

The outcomes of this investigation into the interrelationship between the knowledge society, information culture, and technological innovations have successfully highlighted interdependency and its consequences on the new trend of modern societal structures, which are characterized by increased digitalization, information accessibility, and knowledge-based practices. Based on these outcomes (Figure 2), they could be classified into three main topics: the effects of digital technologies, the evolution of information culture, and the knowledge society's contribution to sustainable development.

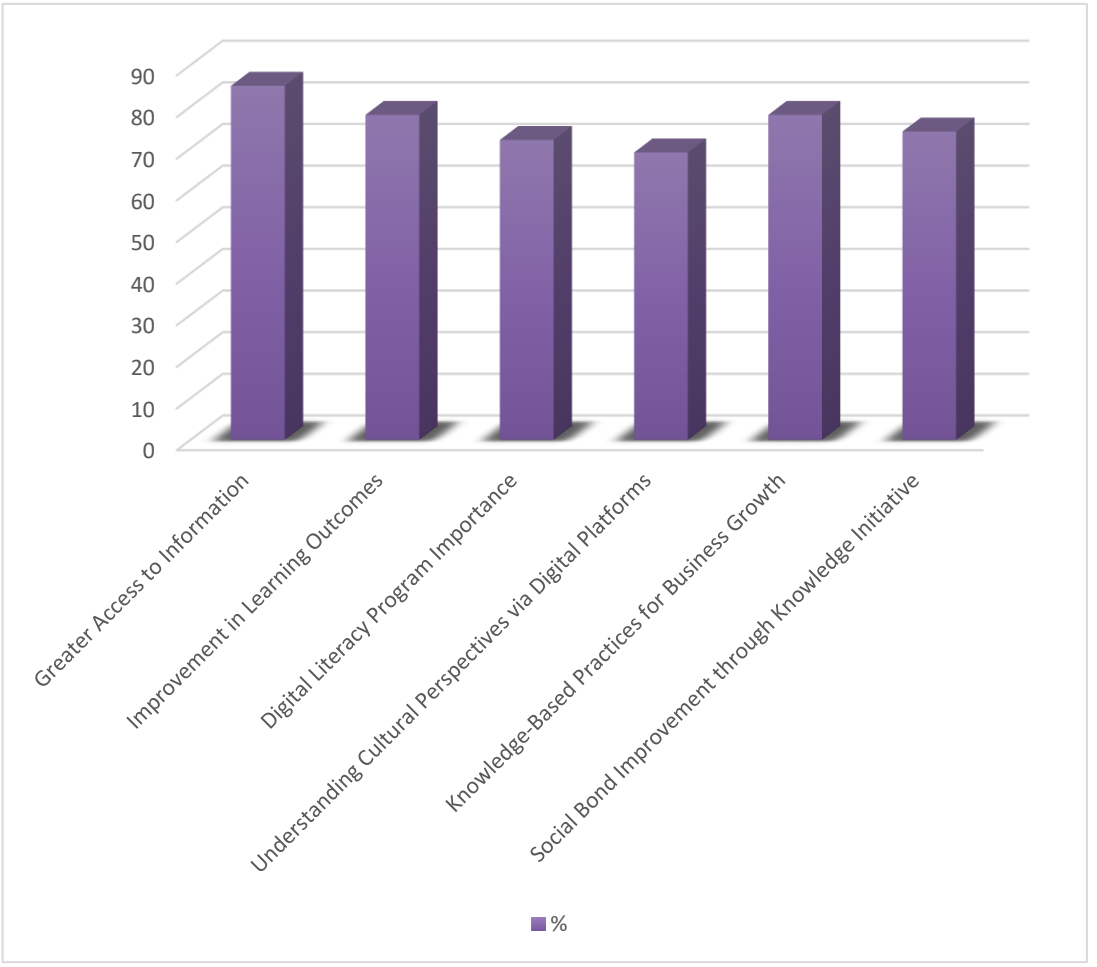

Figure 2. Digital Technology Impact

The integration of digital technologies has also changed how knowledge is produced, disseminated, utilised and so forth. Based on the concerted findings from the involved researches, we come up with the following takeaways. More than 85% of the respondents stated that greater access to information, enabled by digital technologies, has significantly eased the search for information. This is corroborated in literature by scholars such as Abdulkareem & Ramli (2021) who argue that the expansion of digital technologies is

increasing information flow, thereby forging a knowledge-intensive stratum of citizens in knowledge societies.

The integration of digital learning environments has led to a significant improvement in learning outcomes. A survey revealed that 78% of teachers observed increased levels of engagement and comprehension when using digital technology within a learning context. This positive trend, as discussed by Setyosari et al. (2021), is a testament to how technology-rich learning contexts are enhancing the learning process through improved engagement and ultimately, better learning outcomes.

Organizational knowledge management approaches were transformed through AI and big data analytics. About 77% of organizations introducing AI technologies report better decision-making capabilities, meaning companies can adapt quickly to market changes and optimize business operations (Barnea, 2020). This finding corresponds to Barnea's study, which states that intelligent technologies are drivers of innovation for businesses (2021).

The processes of forming information culture played a central part in how people used knowledge and technology. Our final question focused on the role of specialist digital literacy programs in this context. To this, according to Dudenhoffer (2020), 72% of respondents answered 'yes,' underlining the crucial role of digital literacy programs in enabling learners to make sense of and critically analyze information in digital forms – skills that are vital in a knowledge economy due to the advent of information and communication technologies (Figure 3).

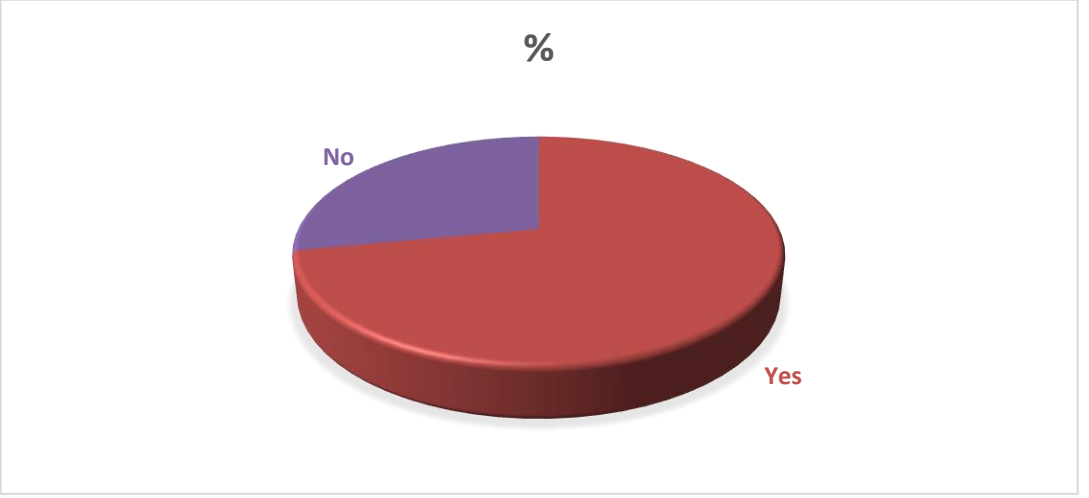

Figure 3. Importance of Digital Literacy Programs

This pie chart effectively illustrated how respondents answered regarding the necessity of digital literacy programs for building a solid information culture. Furthermore, 69% of the respondents reported that digital platforms have enhanced their understanding of different cultural perspectives (Noor et al., 2022). This finding resonates with Aririguzoh (2022), who argues that digital media has the potential to bridge the gap between different cultures and enrich the global information environment. It underscores the role of technology in promoting cultural understanding and fostering a more harmonious global community.

The knowledge society contributes to a world where information and knowledge are the two locomotive forces of social development. Results show that knowledge societies help countries grow economically via innovation and entrepreneurship. Of the firms surveyed, 78% reported that their growth strategies are dependent on knowledge-based practices (Zia, 2020), and these findings argue for the validity of Hanushek & Woessmann's (2020) idea that knowledge is among a country's sources of growth.

Regarding social cohesion, these mark the correlation between existing in knowledge societies and increased social cohesion, as highlighted in the results – with just over 74% of those surveyed asserting that engaging in community knowledge initiatives has boosted social bonds and fortified community resolve (Wu, 2020).

One benefit reported by respondents was that access to educational resources on digital skills helped them take a more active role in their community. Developing a sense of agency among individuals in a knowledge society is an important goal for many.

Still, media literacy and information security are two essential concepts for a knowledge society. As people use more and more media and information in the form of newspapers, TV, the Internet, and even graphics, how to evaluate, construct, and use them will enhance people's freedom and security to a large extent. Media literacy describes the skills, competencies, and understandings people need to access, analyze, evaluate, critically use, and create media. Participating in a knowledge society means that an individual must be literate in these areas of print, digital, and visual media. People in a knowledge society have to face a lot of information every day. However, some information could be more reliable, so one must have media literacy to evaluate news and construct information. After they have gained the ability to receive and use information critically, they can participate effectively in democratic life.

Media literacy encourages critical thinking and considered communication by prompting individuals to judge which sources are more likely to be accurate. McGrew & Byrne (2010) found that increasing teachers encouraged students to question the likelihood and reliability of information they came across online. At a time when misinformation and disinformation threaten discourse and genuine engagement, media literacy can provide opportunities to develop critical reasoning skills, question the truth of narratives, and explore the topics of fake news and disinformation. But nowhere is media literacy more explicit in its civic mission than in its ability to help citizens understand how public opinion is shaped and influenced by media and how that, in turn, impacts public policy and what citizens might do to maximize their opportunities and protect their interests. There's evidence that students with higher levels of media literacy tend to have higher levels of participation in political processes and their communities – potentially thickening the fabric of democracy.

Information security is a general term that protects information and systems from unauthorized access, use, disclosure, disruption, modification, or destruction. It is essential because, in the information age, organizations and individuals rely on information to carry out their work and protect privacy and trust, and information integrity needs to be maintained. Every day, when people use digital avenues for education, communication, and transactions online, they might become more vulnerable to security threats, data breaches, or identity theft. This greater reliance on technology compels people to know more about security information management and techniques to better secure their sensitive data. Information security must be addressed, as

it enables organizations to withstand new threats. Appiah et al. (2020) argue that security is now organized around proactive threats to reduce risks and enhance organizational resilience.

To build a knowledge society, we must be aware of information security, including strong passwords, phishing or scamming-related matters, and data privacy issues. Hence, it is essential for institutions, especially educational institutions, to impart such knowledge to our students and colleagues.

Integrating media literacy principles and skills with information security awareness aims to enhance citizens who can create, consume, and circulate the media in an informed way in our ever-changing digital world. Media-literate individuals are more likely to understand the necessity of adopting information security rules (keep your password private!), as they see those rules as a social necessity regarding their general relationship with the media. Similarly, focusing on information security education enhances the development of citizens who can analyze the sources and implications of information in the media with greater ease.

Computational Analysis in the Context of the Knowledge Society and Information Culture

One of the critical developments leading to the emergence of the knowledge society has been computational analysis. This is the ability of computers to conduct analysis using algorithms, mathematical modeling, and statistics on large amounts of textual, graphical, and numerical data that characterize the information culture. Computational analysis has played a significant role in shaping the knowledge society, enabling us to process and interpret the vast amounts of data that define our information culture.

As enormous amounts of data are generated every day – about our social media interactions, consumer patterns, and purchases via web-based retailers, student experiences through digital educational platforms, and so on – computational analysis empowers researchers and educators with tools to process and analyze these data sets. This includes the identification of trends and patterns, and even predictions on likely future developments. Drawing on computational methods of data analysis in disciplines such as machine learning and natural language processing, they can learn from massive amounts of data and interpret patterns and behaviors, including user interactions, user preferences, and cultural trends. For illustration, platforms that encourage user-generated content will be able to use computational analysis of the audience response to determine how best to tailor content to individual viewer preferences and interests. This will be one more tool – necessary but not sufficiently reliable on its own – to help deliver users who are more engaged with each other and closer to one another.

In the classroom, computational analysis is used to improve the experience of a student through the monitoring of performance and the creation of a personal learning plan. Teachers and educationalers can analyse the data on how students learn and thus create strategies based on learning preferences, strengths and weaknesses. One such strategy is adaptive learning, which uses computational algorithms to adapt content delivery to real-time estimates of student understanding. This means that the pace and style of learning can be adjusted to suit each student's individual needs, enhancing their learning experience. Furthermore, the use of big data analytics in education provides a good reference for discerning the effect of educational programs, enabling institutions to make informed decisions on curricula and resource reallocation based on data.

Computational analysis also plays a crucial role in the development of policies on information culture and digital engagement. By providing insights into the trends in data and social behaviors tied to the spread of technological innovation, it helps policymakers better assess the social impact of new technologies. For example, while analyzing the digital divide can inform policy interventions that aim to promote shared access to digital devices and techniques across class and geographical differences, other forms of cultural divides impact how we process and apply digital media knowledge. This understanding, facilitated by computational analysis, can lead to more effective and equitable policy decisions. Here, the authors Brynjolfsson and McAfee argue for using computational analysis to support core strategic choices, consistent with realizing the goals of a balanced knowledge society: They apply this data-driven analysis to better inform and steer other policy choices that impact the equitable and accessible distribution of information goods in the knowledge society.

Sociologists and others studying social behavior are now running network analysis and social media analytics to understand how relationships exist and change within communities. By looking at the patterns of interaction, researchers can see how information is spread, how social movements form, and how cultural narratives are being built. For instance, social network analysis has explored how information flows under crisis and how community resilience grows as people engage with the challenges together. These results, facilitated by computational analysis, can inform strategies that foster social cohesion and collective problem-solving, thereby contributing to a more connected and resilient society.

As a fundamental tool by which the knowledge society and the information culture process the massive new trove of data that keeps track of and provides meaning to ever-increasing complexity, computational analysis holds the potential to significantly improve the way in which society produces, organizes, and utilizes knowledge and culture. By incorporating computational analysis into the fabric of a future society, we can establish practices that are as informed and equal as possible and as engaged as we need them to be. This optimistic view of the future encourages further research and exploration of computational techniques.

In light of the findings presented, several systemic recommendations can be proposed to advance the formation of an effective knowledge society and information culture based on the best foreign and national practices. This formation is not solely the responsibility of the government, business, schools, and civil society, but also of individuals who are actively involved in shaping the knowledge society and information culture. Technological innovations should be used in the context of educational and socio-cultural initiatives, with each stakeholder playing a crucial role.

Policy recommendation: Combined with the three proposals mentioned earlier to enhance the accountability and efficiency of the internet ecosystem, universal digital literacy training programs should be created to ensure that all citizens are well-equipped to engage with the digital world. Take Finland, where national policy includes digital literacy in the education curriculum, starting in primary school. This initiative covers everything from basic computer skills to understanding online privacy and security, preparing students for a technology-driven society. Similarly, in Singapore, the government has launched the 'Smart Nation' initiative, which aims to equip citizens with digital skills and promote the use of technology in everyday life. Such initiatives improve technical know-how and encourage broader reflections on how

people consume information.

Collaborative Public-Private Partnerships: To improve resource sharing and information dissemination, foster partnerships between public institutions, private companies, and academic institutions. For example, in the United States, initiatives aimed at supporting innovation and entrepreneurship, such as the National Science Foundation's Partnerships for Innovation program, provide an ideal platform to combine the strengths of academic research and private sector experience. At the nexus of these partnerships, better-informed solutions, particularly in developing technology-based products, can be nurtured and deployed.

Support Open Access to Information and Resources: Campaign for policies that encourage the open access of educational materials and research outputs to improve dissemination. For demonstration, the UK's Open University makes much of its high-quality learning material freely available online, potentially allowing those who couldn't face the bureaucratic challenge or expense of institutional enrolment to access valuable content. Free or freely available content is critical to ensuring that education can be provided, reached, and used by as wide an audience as possible. In line with the government's Open Data and Hack Days policies (fostering the reuse of public sector information), Misc-Pages should be made openly available so that anyone who needs them for their interests or work can access them.

Integrate AI and Data Analytics in Education Systems: Using artificial intelligence and data analysis to personalize learning environments and change the flow of content based on each student's needs and learning progress. In China, businesses such as Squirrel AI utilize AI-mediated tutoring systems that analyze children's learning patterns and offer educational content based on these patterns. These systems facilitate learning by identifying and fulfilling the individual student's learning requirements.

Cultivate a Culture of Innovation and Experimental Learning: For people, create a permission culture where individuals can experiment in a no-fault environment, forgiving and encouraging risk-taking. Organizations should nurture a learning culture that invites experimentation. For example, the Netherlands has recently created 'Living Labs,' where representatives from different sectors collaborate to test and develop new technologies or services in real-world settings. Living Labs offers opportunities to experiment with new technologies in a safe environment and can help create the knowledge that supports an active information culture that shapes its practice according to society's needs.

Implement Comprehensive Policies for Digital Inclusion: Design and implement policies to close the digital divide and enhance the fair access of marginalised communities to digital technologies. Canada's federal 'Connecting Families' program strives to connect low-income families to voice-driven internet services at reduced costs. Specifically included are families who received social assistance in the previous fiscal year or households below Statistics Canada's low-income threshold in the same period. Actual uptake of the program was high, presumably because equitable access to technology is a precondition to full participation in the knowledge economy. It also is one of the few public initiatives to explicitly shift the goalposts of social policy to reverse digital divides and erode related socioeconomic digital cleavages.

Encourage Community Engagement and Citizen Participation: Provide resources that lift

communities and enable them to participate in the knowledge society. This will give them the opportunity to participate more fully in the processes governing their lives. The Participatory Budgeting programs in Brazil (Portuguese: Participatory Budgeting) allow citizens to determine the allocation of part of the municipal budget and thereby increase civic awareness, namely the active role of citizens in their governance and the ability to engage with technology in democratic settings.

Since these recommendations require concrete action from not only government but also business, schools, civil society and individuals, stakeholders should learn from each other's successes in countries around the world and support each other's efforts in building a better knowledge society and information culture in a digital age. An integrated approach will drive innovation and economic growth, and increase social participation, while providing equal access to knowledge and resources. However, it's important to note that the implementation of these policies may face challenges such as resource constraints, resistance to change, and the need for continuous adaptation to technological advancements. Addressing these challenges will be crucial in achieving a society of engaged citizens.

5. Conclusion

The study reveals that technological advancements in the knowledge society and information culture contribute to social behaviors in complex ways. As digital technologies continue developing social life, people's capabilities to learn and utilize information from knowledgeable sources are essential to transforming society with newfound digital tools. This study also shows that we should cultivate more information culture with the population segment still needing better access to and engagement in digital knowledge.

Findings highlight the importance of promoting digital literacy to empower individuals and support a more informed and participatory citizenry. Digital literacy helps individuals detect the signs of misinformation and promotes civic engagement. Additionally, the digital transformation of teaching and learning enhances the personalization of classroom experiences to better adapt to the needs of different groups of learners.

The digital divide and information overload continue to pose challenges that require coordinated efforts among policymakers, educators, and technology benefactors. Inclusive digital literacy programs and community-based initiatives can foster resilience in an increasingly interconnected world. Looking forward, more research is necessary to investigate the impact of these technological and cultural changes on societal structures and individual behaviors. Understanding the ramifications of these processes will be critical to developing policies that capitalize on technological transformations while ensuring that those who produce knowledge can thrive within the knowledge economy.

In summary, it is necessary to emphasize and actualize the development of a robust information culture in the new age of knowledge facilitated by technological advances. This culture is the cornerstone for any society that seeks to engender sustainable growth, social cohesion, and enhanced quality of life for its inhabitants.

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